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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
RASHID, DAVID	

ART UNIT	PAPER NUMBER
2624	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/751,411	CHEN, AUBREY KUANG-YU	
	Examiner	Art Unit	
	David P. Rashid	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

1. This office action is responsive to the claim and specification amendment received on 8/3/2007. **Claims 1 – 10** remain pending.

Claim Objections

2. In response to applicant's claim objections amendments and remarks received on 8/3/2007, the previous claim objections are withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. **Claims 1 – 2, 5 – 7, and 10** are rejected under 35 U.S.C. 102(b) as being anticipated by Macromedia (Using FreeHand, Macromedia Inc., First Edition: March 2001, pg 1 – 485 (*relevant pg 1 – 10, 23 – 28; 67; 125 – 127; 149 – 155; and 162 – 165 as submitted to the applicant, and easily accessible from website given*)).

Regarding **claim 1**, Macromedia discloses a method (“Draw a path with the Pen tool”, pg 25) for creating a vector representation (“FreeHand is a vector-graphic drawing application”, pg 67) of an image (image of eye on pg 23), the method comprising the steps of:

acquiring position information (position information for the points can be obtained by the Object inspector on pg 155) for two nodes (“number 1 dot” and “number 2 dot” on pg 25) of the image from user input (steps (1), (2), and (3) on pg 25);

determining to generate a curve sketching a segment of an outline of the image (step (3) and bottom picture on pg 25) between the two nodes according to the two nodes ;

acquiring position information (position information for the points can be obtained by the Object inspector on pg 155) of a new node (number 3 dot in step (4) on pg 26) on the image from additional user input (step (4) on pg 26 and top picture on pg 26);

determining to generate another curve sketching another segment of the outline of the image between the new node and the node where the previous curve ends according to the new node and the node where the previous curve ends (step (4) and top picture on pg 26); and

repeating the step of acquiring position information of nodes and curve generation accordingly until the outline of the image is completely sketched (steps (5) through (10) on pg 26 – 27, and using the Object inspector on pg 155).

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Regarding **claim 2**, Macromedia discloses the method as claimed in claim 1, wherein the image is a bitmap image (pg 125 – 127).

Regarding **claim 5**, Macromedia discloses the method as claimed in claim 1 further comprising smoothing joints (the user has the ability to reselect each point and reshape the path, making it smoother as outlined in pg 153) of the curves sketching the outline of the image.

Regarding **claim 6**, claim 1 recites identical features as in the means-plus-function claim 6. Thus, references/arguments equivalent to those presented above for claim 1 is equally applicable to claim 6. All means-plus-function elements of claim 6 are anticipated by a computer as inherently disclosed by Macromedia.

Regarding **claim 7**, claim 2 recites identical features as in claim 7. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 7.

Regarding **claim 10**, claim 5 recites identical features as in claim 10. Thus, references/arguments equivalent to those presented above for claim 5 are equally applicable to claim 10.

5. **Claims 3 – 4 and 8 – 9** are rejected under 35 U.S.C. 102(b) as being anticipated by Macromedia (Using FreeHand, Macromedia Inc., First Edition: March 2001, pg 1 – 485 (relevant pg 1 – 10, 23 – 28; 67; 125 – 127; 149 – 155; and 162 – 165 as submitted to the applicant, and easily accessible from website given)) in view of Gebhard et al. (An Active Contour Model for Segmentation Based on Cubic B-splines and Gradient Vector Flow, Lecture

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Notes in Computer Science, Springer Berlin / Heidelberg, Volume 2208/2001, 2001, pg 1373 – 1375), Paramore (Simple Curve Fitting, 2002, pg 1 - 4), and Ananya (US 6,441,823 B1).

Regarding **claims 3 and 4**, while Macromedia discloses the method as claimed in claim 1, Macromedia does not teach wherein the curve sketching one segment of the outline of the image between two of the nodes acquired from user input is generated by the steps of:

- obtaining a number of sample points using a tracing algorithm between the two nodes;
- generating a vector flow between the two nodes according to the sample points;
- determining a function describing the sample points by a curve-fitting algorithm; and
- adopting the function to one describing a cubic Bezier curve, where the cubic Bezier curve is the curve sketching one segment of the outline of the image between two of the nodes.

Gebhard discloses an active contour model for segmentation based on cubic b-splines and gradient vector flow (Abstract) that includes

- obtaining a number of sample points (equation given on pg 1373 for k control points P_i)
- using a tracing algorithm between two nodes (the nodes being $i = 1$ and $i = k$ in the equation);
- and

- generating a vector flow between the two nodes according to the sample points (“GVF field” in pg 1374 – 1375 which is “gradient vector flow”).

It would have been obvious to one of ordinary skill at the time the invention was made for the curve sketching one segment of the outline of the image between two of the nodes acquired from user input is generated of Macromedia to include obtaining a number of sample points using a tracing algorithm between the two nodes; and generating a vector flow between the two nodes according to the sample points as taught by Gebhard AND the two nodes of

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Macromedia to be the two modes as taught by Gebhard "...to present advances in segmentation for visualization and quantitative analysis in bioimaging.", Gebhard, Abstract.

Paramore discloses a simple curve fitting algorithm (abstract, page 1) that includes determining a function describing the sample points by a curve-fitting algorithm for curve sketching (section 1, pg 1 – 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Macromedia in view of Gebhard to include the simple curve fitting algorithm of Paramore to determine a function describing the sample points by a curve-fitting algorithm "...that can be applied to any general multidimensional function...", Paramore, abstract, pg 1.

Ananya (though Macromedia uses a Bezier tool which is a Bezier curve), discloses a function to one describing a cubic Bezier curve (FIG. 9), where the cubic Bezier curve is the curve sketching one segment (segment from a0 to a1 in FIG. 11) of the outline of the image between two of the nodes (FIG. 11, elements a0, a1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the function describing the sample points by a curve-fitting algorithm of Macromedia in view of Gebhard and Paramore to adopt the function to one describing a cubic Bezier curve, where the cubic Bezier curve is the curve sketching one segment of the outline of the image between two of the nodes as taught by Ananya "...to enable the construction of curves more intuitively, predictably, and accurately.", Ananya, Col. 2, lines 10 – 11.

Regarding **claims 8 and 9**, claims 3 and 4 recite identical features as in the means-plus-function claims 8 and 9. Thus, references/arguments equivalent to those presented above for

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claims 3 and 4 are equally applicable to claims 8 and 9. All means-plus-function elements of claims 8 and 9 are anticipated by a computer as inherently disclosed by Macromedia.

Response to Arguments

6. Applicant's arguments filed on 8/3/2007 with respect to independent **claims 1 – 10** have been respectfully and fully considered, they are not found persuasive.

7. **Summary of Remarks** regarding **claims 1 and 7** (*though it is believed applicant was referring to independent claims 1 and 6, same argument would apply*):

Applicant argues that Saga fails to disclose, suggest, or teach, inter alia, the following feature recited by above amended independent claims of the present application (*@ response page 4*). More specifically, applicant argues

(i) that the claims in question disclose the curve being generated according to two nodes or a new node with an end node of previously generated curve and Saga regards to recognition of curves, but the application regards to automatic generation of curves (*@ response page 5*); and

(ii) that the claims in question disclose two nodes used to generate a curve, and a new node that can be integrated with an end node of a previously generated curve, and used to generate another curve such that the Saga reference is different (*@ response page 5*).

8. **Examiner's Response** regarding **claims 1 and 7**:

Applicant's arguments with respect to claims 1 and 7 have been respectfully considered but are moot in view of the new grounds of rejection.

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Freehand 10, a computer drafting program made by Macromedia from which it's official manual was released in 2001 (pg 3), clearly anticipates the claims in question using the "Pen Tool" both disclosed within the Tutorial Section (pg 23 – 28) and Pen Tool Section (pg 149 – 154). It has been shown above in **Section 4** that Macromedia's software Freehand 10 anticipates claims 1 and 7.

9. **Summary of Remarks** regarding **claims 2 – 5 and 7 – 10:**

Applicant argues that since claims 2 – 5 directly or indirectly depend from claim 1, and claims 7 – 10 directly or indirectly depend from claim 6 are similarly believed to be patentable. The secondary reference to Gebhard does not overcome the noted deficiencies of the Saga and Eller references.

10. **Examiner's Response** regarding **claims 2 – 5 and 7 – 10:**

Applicant's arguments with respect to claims 2 – 5 and 7 – 10 have been respectfully considered but are moot in view of the new grounds of rejection. It has been shown above in **Section 4** that Macromedia's software Freehand 10 anticipates claims 1 and 6, and thus claims 2 – 5 and 7 – 10 are not allowable at least by dependency (directly nor indirectly).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/David P. Rashid/

Examiner, Art Unit 2624

David P Rashid

Examiner

Art Unit 2624

/Brian P. Werner/

Supervisory Patent Examiner (SPE), Art Unit 2624